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THE MIXTECA COUNTRY IN THE STATE OF OAXACA, MEXICO.

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Mexico is a land of surprises, a country of extremes, a nation of contrasts—where the old and the new, the poor and the rich, the crude and the refined are neighbors, and where ultra conservatism is elbowed by evidences of modern progress.

The topography in 75 miles jumps from ocean level to the snow-capped summit of Orizaba, 17,362 feet above that datum, and the climate varies from perpetual summer of the Torrid Zone to perennial snows on Popocatepetl, its neighbor Ixtaccihuatl and other mountains. The flora include cacti of the desert, wheat and maize of the temperate zone, cotton, sugar, coffee, and luxuriant tropical growths with flowers and orchids in endless variety. The forest products of the highlands embrace oaks, pines, palo-blancho, mesquite and huisachie, while the hot country supplies rubber, ebony, mahogany and other hard woods. Many stream beds are dry "arroyas" or "barrancas," except during brief intervals when flood conditions temporarily transform these into rushing torrents; while the discharges of other rivers are fairly maintained throughout the year, and most watercourses have carved rugged cañons in the rocks or deep gashes in the alluvial plains.

The topographical features have interfered with close associations existing between different portions of Mexico, for the country may be divided into the "tierra caliente" and "tierra alto," the former comprising relatively narrow strips of hot lands bordering the Gulf of Mexico, the Caribbean Sea and the Pacific Ocean, the latter forming the main plateau bounded by the two sierras, Orientalis and Occidentalis. It is these mountain ranges

and intervening long desert stretches which have made intercommunication difficult.

The sierras approach each other near the City of Mexico, and the adjacent states, which are largely mountainous, maintain a population whose density is greater than that in other portions of the Republic.

The people, mainly an assemblage of descendants of numerous tribes, many speaking ancient languages, are apparently united and patriotic in supporting a government nominally republican but by reasons of conditions nearly monarchial, and although our near neighbor, we fail to recognize that few countries have had the soil more thoroughly stained by the blood of their people than the Republic of Mexico.

The genesis of Mexican history is shrouded in uncertainty, little being known as to the origin of the Toltecs, Aztecs, Mixtecas, Zapotecs, and other ancient peoples who came from unknown lands, but we are told of constant internal warfare and of the sacrifice of prisoners. Then, nearly 400 years ago, Cortez with a few hundred followers captured Mexico with its millions of people, who for three centuries were dominated by rapacious rulers and slaved to fill the coffers of Spain. The tales of rapine and plunder, of robbery and murder, done with the connivance of the ruler of Spain, or often in the name of the Church, tell how the inhabitants of Mexico were ground under the heel of oppression until their number was greatly reduced.

In September, 1910, Mexico will recognize the centennial of its independence, or rather celebrate the hundredth anniversary of Hidalgo's first stroke for freedom, as for a half century subsequently the country was in the throes of war to establish a government in which the people had some voice, no less than forty rulers, usurpers, governors, dictators, presidents, and emperors having disturbed the nation during this period. Hence the peaceful development has been confined to the latter part of the century which will be celebrated. Eleven years elapsed between the bold effort of Miguel Hidalgo and the breaking away from the Spanish yoke under Emperor Iturbide, and three years later (1824) Guadaloupe Victoria was proclaimed the first President of Mexico.

A large proportion of the fifteen and a half million population can be considered as very poor, and yet within a genera-

tion Mexico has passed from the verge of bankruptcy to a position among nations of the Western Hemisphere where its credit is second only to that of the United States.

Although most of the 11,000 miles of railway have been constructed within twenty-five years, these and the telegraph lines are under government control, and, while largely dependent upon foreign capital for development of its resources, Mexico maintains a tariff which protects domestic manufactures and products.

Its system of compulsory education is expanding and instilling among the people ambition to better their condition. The

FIG. 1.

Girls' school and teachers in City of Tlaxiaco, illustrating the characteristic features of the children.

peons, accredited as lazy, cheerfully perform tasks demanding physical exertion which would appall our average workmen, and, proclaimed as dishonest, are faithful in discharging individual trusts committed to them. In the city streets elaborately gowned women are brushed by the barefoot Indian mother whose scanty costume is shared by an infant swung on her back in a "rebosa" and the burro with a pack larger than himself, or the "cargadors" bearing heavy or cumberous burdens appear as competitors to modern express wagons, or as contrasts with elegant equipages or automobiles.

Mercantile houses and offices in cities close for two hours at

midday, nominally for " siestas ", but few American shop-keepers or merchants devote more hours per day to counter business than the average Mexican merchant. However, the numerous " fiestas " recognized as partial or full holidays reduce the average of shop hours.

As a rule the rich have large wealth, while the poor have little, if any, possessions beyond the limited wardrobe which serves as clothing, ample for the midday warmth, but apparently insufficient protection for the cool night air, for in much of Mexico one seeks the shade while the sun is shining, but sleeps under blankets at night.

FIG. 2.

Peon children in the Mixteca country.

It is not unusual in " casas grandes " to have formal dinners of many elaborate courses in the middle of the day, which include the plebian " tortillas " and " frijoles ", the staple support of the peons throughout Mexico.

Appreciating the general conditions outlined, it was not surprising to find within less than 300 miles of the capital of the Republic a section of which few in the City of Mexico know little except by hearsay, but which offers much of interest in its history, topography, products, its people and their habits.

Southeast of the capital lies the State of Oaxaca, fronting on the Pacific Ocean for 300 miles, but of its total area of 35,392 square miles (equivalent to four-fifths of the area of the State

of Pennsylvania) the bulk is mountainous, the average elevation above sea-level approximating that of its historic capital, Oaxaca, 5000 feet.

The population of the State in 1900 was 948,633.

The only railroads within the boundaries are parts of the Vera Cruz and Pacific, the Tehuantepec, and the Mexican Southern roads (the latter connecting the cities of Puebla and Oaxaca); the total mileage within the State (370 miles), reaches but a small percentage of its area, while the extent of wagon roads in the mountains is limited. These conditions hold true

FIG. 3.

Fountain in Market place, City of Tlaxiaco. Three of these fountains supply the inhabitant with water which is carried to their homes in vessels of various kinds.

for the neighboring State of Guerrero, which like Oaxaca is mountainous, with but one railroad and few wagon routes within its borders.

In the central western portion of the State of Oaxaca, known as the Mixteca country, live the Mixteca people who claim to trace the history of their race to the sixth century of the Christian era, a mountain people whose pueblas and towns are located in valleys of 6000 to 7000 feet altitude with surrounding mountains 2000 to 4000 feet higher. The alternation of mountain ranges and fairly well watered valleys presents superb vistas from the crests of divides, some showing beyond the valleys an apparent succession of ranges with peaks or individual sierras overtopping their neighbors, while views from other passes pre-

sent such variety of form and direction as to merit the description of "scrambled mountains." In one valley is seen corn and wheat as predominating, the mountain sides bearing trees of the temperate zone, while another, which is at lower average altitude, exhibits large areas of vivid green sugar-cane fields, fringed with palms or banana trees.

The visit to the Mixteca country was made via Parian, a water station on the Mexican Southern Railroad, 36 miles north of Oaxaca, elevation 4900 feet, where the horse trail was taken westward over the mountains, the objective point being the City of Tlaxiaco, 90 miles distant. This trail, on most of which wheeled vehicles cannot be used, traverses a series of steep mountains with intervening valleys, and in the latter are located the towns of Nochixtlan, Teposcolula and a number of minor settlements; the passes over the mountains ranging from 8000 to 8800 feet above sea-level.

Nochixtlan, a town of 3000 inhabitants, located 7000 feet above sea-level and 25 miles from Parian, is supported by liberal nearby areas of grain and corn, by tropical products from the lower valley, and by pack-train traffic passing through it to and from the railroad. The crests of a group of hills, just west of the town, are covered with innumerable pieces of broken pottery, much of it evidently of great age, and from among this accumulation many small carved idols are obtained. Some of these idols have faces and poses suggesting Egyptian origin, others possess features of decided Asiatic cast.

Teposcolula, 30 miles west of Nochixtlan, evidently the remnant of a more pretentious settlement, is claimed to have been the ancient capital of Oaxaca, and the remains of a magnificent church edifice attest the important position the town formerly held. Fluted stone columns, 20 to 30 feet high and 30 to 40 inches in diameter, support by ornamental groined arches the damaged roof of the sacristy, while similar columns and arches define portions of what were the nave and transept, and the dome, which is elaborately carved, is falling to pieces, fairly good-sized trees growing from it. The date of construction is unknown, but an adjoining pretentious church edifice now in use is claimed to have been built in 1763, largely from material obtained from the older church. Appearances suggest that, like many other buildings in Mexico, this cathedral was never completed, but the architec-

ture and masonry work equal what we consider remarkable in modern times, and, when it is remembered that each part had to be made of a size which could be transported from distant points on animals, the fitting together of these represents intelligent design, great skill, patience and enormous expenditure of labor.

Another instance indicative of the former importance of this section of the country is in the settlement of Santa Maria Tiltepec, at the base of the mountain separating the valleys of the Nochixtlan and Huajuapam rivers, where there is a large church

FIG. 4.

Transportation methods along a trail in the Mixteca country.

whose facade and sides are replete with carved stone work. It bears the date 1689, and, as it was probably a number of years in construction, was being built at the time William Penn settled in Philadelphia. The exterior of the building, the liberal display of gilded ornamentation of the interior, and the elaborately decorated organ, are in marked contrast with the surrounding habitations, consisting of some two-score huts with adobe or cane sides and roofs thatched with split aloe or palm leaves.

At Teposcolula the main trail forks, one branch passing southwest to Tlaxiaco, the other northwest to Huajuapam, the two prominent cities of the Mixteca country.

In towns and villages a few " carretas " drawn by oxen were

in evidence, but these are employed only on the streets or on adjacent farm lands in the valley, for even these crude wooden constructions, in which no iron is used, cannot cover the steep, rough and often narrow trails across the mountains.

Tlaxiaco, a progressive town of 8000 inhabitants, with substantial buildings, is 90 miles from a railroad or from any continuous highway upon which wheeled vehicles are used, and nearby settlements add several thousands to the town's importance. It is well built, having some handsome houses and large stores, supporting an electric plant for street lighting operated by steam engines supplied by a 30 horse-power boiler fired with wood, and telegraph and telephone are also installed. The boiler, engine, and generators were carried or dragged to the town and among cumbersome furniture which one is surprised to find, owing to the difficulty of transportation, are pianos, billiard tables, or large mirrors, and the whirr of the sewing machines and click of type-writers are in evidence. On Saturdays the broad market place is a scene of great activity, when pottery-makers, weavers of "sarapes", "rebosas", "serviettas", baskets, and hats, iron workers, wood choppers, charcoal burners and farmers, the latter with his maize and "zacate", barter their products for meat, fresh vegetables, tropical fruits, skins, sugar cane, "pulque" and "aquadiente." The attendance ranges from 3000 to 4000, making the scene active and alive with color, and some vendors travel for two or three days to reach the market.

A purchaser entering a Tlaxiaco store finds many surprises in the extent and variety of stock carried, and the number of sewing machines sold in this Mixteca country is sufficient to encourage the maintenance of special depositories, the noise of the shuttle often coming from a one-room adobe or cane hut with thatched roof far from the towns.

A ride in one of the two passenger wheeled conveyances of which Tlaxiaco boasts was a special compliment tendered by a wealthy merchant. The road was rocky and rough, but two strong mules drew the buckboard, for such it was, through the city and out upon the hill on which San Pedro, the ancient city, formerly stood. With this exception no vehicle for travel was seen until, after following the trail for 200 miles, a "diligencia" drawn by five mules was utilized to climb a steep mountain face by a zig-zag road which in five miles overcame a difference in altitude of 4500 feet.

A collection of adobe huts, a cemetery, and a church cover the site of San Pedro where General Porfirio Diaz routed the allied French and Austrian troops in 1866, a location which justly wins for Tlaxiaco the term "Buena Vista," for there are grand mountain views on all sides. When the writer subsequently informed President Diaz of this visit, the soldier immediately overshadowed the statesman, as with sparkling eyes and dramatic gestures the veteran recited details of the warfare carried on among the mountains of the Mixteca country, and told of bold strategic methods by which forces greatly superior in number and equipment were defeated.

In the valleys, which have elevations ranging from 5000 to 7500 feet and are fairly well watered and cultivated, corn, wheat, and some sugar cane are the staple products. In towns adobe dwellings and stores and the ubiquitous Mexican churches are in evidence, but the majority of the people live in pueblas, collections of adobe or cane huts, thatched with maguey or palm leaves, and the most of the population are known as Mixteca Indians. Outside of the larger cities but little Spanish is spoken, the language of the Mixtecas being quite distinct, sometimes suggestive of the Orient, and occasional types of Indians resemble the Asiatics.

Some of the Mixtecan words and their equivalents in Spanish (the language which predominates in Mexico) and in English are:

English.	*Spanish.*	*Mixtecan.*
River	Rio	Yuté
House	Casa	Vee
Water	Agua	Hindute
Tree	Arbol	Ñutu
Charcoal	Carbon	Ticalliñútu
Bread	Pan	Yxtatila
Corn-fodder	Zacate	Dndojo
Trail	Camino	Hichi
Man	Hombre	Te

These apply to the Mixteca country only, for within a few leagues other dialects differing in many features prevail.

The triumvirate honored by patriotic Mexicans consists of Hidalgo, Juarez and Diaz. Of these President Diaz was of Mixtecan parentage, and his tutor Juarez came from the neighboring Zapotecs. The President's familiarity with the Mixteca country, its mountains, streams, towns, pueblas and its trails,

was made apparent in two interviews in which he showed an intimate knowledge of conditions and resources. As a soldier he traversed the mountains of Oaxaca, and among the engagements mentioned on his military record are those of Nochixtlan, Huajuapam and Tlaxiaco.

In a country remote from avenues of transportation, and where mountains interfere with constructing wagon roads, crude methods of manufacture, agriculture and industry are to be expected. A soil fertile by nature is limited in production by shallow cultivation with the wooden plow. The clip from herds

FIG. 5.

Ferreria (Catalan forge) in Oaxaca. Note the water-fall in back of the building which furnishes power to operate the hammer and water wheel and also for blast by means of a trompe.

of sheep and goats which range the mountains and by devouring the younger growth prevent forest reproduction, is carded, spun and woven by hand into articles for personal wear and domestic use.

Iron ore, won from deposits which have large reserves of excellent mineral, with charcoal, made in the woods in small meilers, is fed to open forge fires, both ore and fuel being transported in sacks on burros. A column of water falling in a wooden trompe produces blast to accelerate the fire, and the loupe when completed is wrought under a helve hammer operated by a water wheel, the bars or anchovies being sold in towns at from 4 to 6 cents (gold) per pound. The abundance of iron ore and the un-

wrought deposits of coal in the Mixteca country give promise of a more extensive modern iron industry in the future.

The coal is apparently in the upper Jurassic formation, and in this respect differs from that now mined from the cretaceous horizon of Northern Mexico. The mineral from each of three basins explored is classed as bituminous, carrying considerable ash, but one section in Western Oaxaca produces coal, made dense probably by compression until it resembles anthracite and burns without smoke. The extent of this basin is being tested by the Oaxaca Iron and Coal Company by numerous exploratory

FIG. 6.

Lumps of coal at the mouth of an exploratory drift near Tezoatlan, Oaxaca. The wheelbarrow is used under protest, the natives preferring to handle the coal in crude litters as shown in the background.

drifts, supplemented by two diamond drills which have been carried over mountain trails to the workings.

The topographical and geographical location of the Oaxaca coal, 6000 to 7000 feet above sea-level, and 300 miles from the City of Mexico, whose altitude is 7500 feet, as compared with the Coahuila coal from Northern Mexico, elevation 1500 feet and distant 830 miles from the capital, offer inducement for their development, and reconnaissance indicates that by routes approximately following water courses satisfactory railroad connection

can be made with the Oaxaca coal fields, and that this may be extended to the Pacific coast.

The mountains of Oaxaca also yield ores of the precious metals, of antimony, copper and lead, some of which are won, transported and smelted by crude methods, while others are exploited and treated with modern equipment.

Some contrasts in the Mixteca country are most pronounced; in the treatment of sugar cane, one may see in use crude wooden or stone rolls rotated by animal or water power, and all intermediate methods between these and modern mills thoroughly

FIG. 7.

Band at City of Tlaxiaco. Note modern instruments, youthful performers, leader, and patron to whose generosity the band owes much of its success.

equipped, the latter, however, being convenient to railway transportation.

That the Mixtecans as a rule are industrious was evidenced by the many who, while directing pack trains over the trails, were weaving hats or mats, and by the sound of the loom, or even the modern sewing machine in mud or cane shacks. Their physical endurance is illustrated by bearing heavy burdens for many miles, over rough trails, keeping up a fast trot the while.

Like most Mexicans, the people are fond of music, and the large towns support good bands, while smaller settlements each have an orchestra of some kind. In Tlaxiaco serenades were tendered by orchestra and by band, the latter, having 30 members

(a number of whom were boys) supplied with instruments familiar to ourselves, rendered popular and classic music with excellent effect from scores illumined by candles. On another occasion the orchestra from Tezoatlan crossed a mountain trail for 15 miles to serenade the camp; one of the numbers played being a tuneful composition by a member of the orchestra.

A daily wage rate of 50 centavos (25 cents gold) does not permit these Mixteca bands and orchestras the luxury of uniforms, hence the favorable impression develops when hearing well-known selections played in good time and tune by men and boys clad in linen trousers and blouse, with a "sarape" on the shoulder, a "sombrero" on the head, and sandals on the feet. (The members of the band and the school-girls of Tlaxiaco were dressed for the important occasion when the photographs were taken from which illustrations were reproduced.)

The "sarape", a constant companion for all Mexicans, serves as a coat by day, a cover by night, and a cushion to soften the load carried on the shoulders; but in the rainy season a coat made of palm leaves is often worn.

The Mixteca country is not peculiar in the loose sexual relations which prevail, due to the absence of legal or religious marriage formality among many of the poorer people, for in much of Mexico a large percentage of the children of the peons are illegitimate. It is claimed that in the divorcement of Church and State, which was enforced under Juarez, the government refused to sanction religious marriages owing to the political machinations which had been carried on by a then dominant clergy. But as the fee for a legal civil marriage, or that often demanded for a religious union, is beyond the ability of the really poor, these loose relations are maintained, winked at by both State and Church. Many of these voluntary ties apparently result in happy associations, and families seem to have bonds of affection; but if Mexico is to truly prosper, it will be necessary to have its coming generations imbued with the spirit which is expressed by the Commandment "Honor thy Father and thy Mother," and the respect and love which this spirit develops.

Although this section of Mexico is subject to wet and dry seasons, there is usually sufficient intermediate deposition of rain to permit of dry farming for grains, but where irrigation is practiced the crops are more diversified, larger, and dependable.

Many streams having their sources in the higher mountains are well maintained in the dry seasons, offering possibilities for water power improvement, and one of the camps on the Mixtepec River was at the mouth of a gorge whose nearly vertical walls rise for 200 feet above the stream which rapidly falls through the canon formed, suggesting a site for future hydro-electric installation.

Throughout the Mixteca country numerous churches, a large portion being pretentious, well-built structures, attest the exten-

FIG. 8.

Part of the Ruins of Mitla, Oaxaca, which have been excavated, showing the interior patio of the North Court, the absence of arched construction, the use of monolithic lintels, and some varieties of mosaics.

sion of the Spanish conquest to Western Oaxaca. Cities or important pueblos boast of several churches, and some large structures crown hills with but a scattered assemblage of huts for companions. The architecture varies but little from a general design which is repeated except in a few instances, but some of the carved stone work is unique.

Beyond the broken pottery, small stone idols, copper tools, and some evidently ancient foundations or walls, there are few reminders of the peoples who many centuries ago lived among the

mountains of Oaxaca. But noted relics of ability and industry evidenced by races whose history is now mere conjecture, are adjacent to the Mixteca country, such as the carved stones of Mont Alban, and the elaborate mosaic work at Mitla. More careful research may expose some of these ruins representing earlier civilization in the Mixteca country.

FIG. 9.

Detail from the Ruins of Mitla, Oaxaca, showing some of the mosaic work, so well laid and closely jointed as to have withstood the ravages of time for unknown centuries.

We of the United States, taught that our Continent when discovered by Columbus was peopled by ignorant savages, have difficulty in realizing that within less than thirty years after this generally accredited discovery, Cortez landed in Mexico and found in temples and structures, many of which were subsequently destroyed, evidences of what may be considered a civilization.

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The illustrations presented are of work done before the advent of either Columbus or Cortez by inhabitants of Mexico whose history seems to have been forgotten.

The cliff houses and other scattered relics of an ancient peopl in what is now the United States may be increased by future investigation, but we cannot expect these to rival the ancient ruins of Mexico, Central or South America.

It is claimed that the Mixtecas formerly occupied most of the States of Oaxaca and Guerrero and a portion of Puebla but were driven from the Isthmus of Tehuantepec by the Zapotecs. They were devoted to agriculture while not engaged in warfare with the Zapotecs, Aztecs or other tribes, but succumbed to the Spanish. They, however, were prompt in aiding to drive the Castilians from the country, active in the overthrow of the Maximilian dynasty, and evidenced on many occasions the patriotism which seems to be inborn in mountain people.

The march of progress in Mexico has scarcely touched the Mixteca country, but it may be expected to ultimately extend throughout its mountains and valleys, developing its mineral wealth, waking the echoes by the locomotive whistle or automobile shriek, advancing the earning power of its people, and encouraging in them new ambitions. With modern equipment more intense agricultural development will result; with water powers improved, coal mined, and mechanical appliances installed, manufacturing will expand, and with increasing education the section may be expected to take decisive progressive steps.

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